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EXAMINER	
NGUYEN, TOAN D	
ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/587,913	MITRANI ET AL.	
	Examiner	Art Unit	
	Toan D Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11-25 and 27-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11-25,27,28,30 and 31* is/are rejected.

7)☒ Claim(s) *29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 June 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The indicated allowability of claims 10-14 and 26-29 are withdrawn in view of the newly discovered reference(s) to VanDervort (US 5,812,528). Rejections based on the newly cited reference(s) follow.

Claim Objections

2. Claim 29 is objected to because of the following informalities: claim 29 is a dependent claim of claim 26 but claim 26 has been cancelled.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3, 8, 11-12, 15-18, 20, 24, 27-28 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (US 6,700,891) in view of Heddaya et al (US 6,622,157) further in view of VanDervort (US 5,812,528).

For claims 1 and 11-12, Wong discloses apparatus and method for providing a device level security mechanism in a network, the method comprising:

specifying at least one packet filtering criterion (figure 5A, reference 76, col. 5 lines 50-52);

transmitting one or more data packets meeting the at least one criterion (figure 2, references 22-1 to 22-6) through the network (figure 1, reference 10) from one of the end-point to another (col. 4 lines 45-47);

intercepting at least one of the data packets meeting the criterion (figure 6, reference step 112) using the network agents (figure 1, reference 18) at one or more of the respective locations in the network traversed by the at least one of the data packets (col. 7 lines 21-25);

recording information regarding the at least one intercepted packet at the one or more respective locations (figure 6, reference step 120, col. 7 lines 40-41); and

processing the recorded information to analyze a route of the at least one intercepted packet through the network (col. 7 lines 46-50).

Wong does not disclose using the network agents at intermediate the endpoints. In an analogous art, Heddaya et al disclose using the network agents (figure 1, references 14) at intermediate the end-points (col. 7 lines 20-21).

One skilled in the art would have recognized using the network agents at intermediate the end-points to use the teachings of Heddaya et al in the system of Wong. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the network agents at intermediate the endpoints as taught by Heddaya et al in Wong's system with the motivation being inspected document request message packets as they fly-by and intercepted any request for which it may be possible to fulfill by providing a cached document instead (col. 7 lines 51-54).

However, Wong in view of Heddaya et al does not disclose recording a time of arrival of the at least one intercepted packet at the one or more respective locations. In an analogous art, VanDervort discloses recording a time of arrival of the at least one intercepted packet at the one or more respective locations (col. 6 lines 3-11).

VanDervort discloses wherein processing the recorded information comprises determining, responsive to the time of arrival, transit times of the at least one intercepted packet over network links connected to the respective locations and traversed by at least one intercepted packet (col. 6 lines 3-11 and col. 8 lines 62-64 as set forth in claim 11); wherein intercepting the at least one of the data packets comprises intercepting multiple data packets (col. 6 lines 6-9), and wherein determining the transit times comprises detecting a jitter in transit of the packets over one of the links (col. 10 line 63 to col. 11 line 5 as set forth in claim 12).

One skilled in the art would have recognized recording a time of arrival of the at least one intercepted packet at the one or more respective locations to use the teachings of VanDervort in the system of Wong. Therefore, it would have been obvious

to one of ordinary skill in the art at the time of the invention, to use the recording a time of arrival of the at least one intercepted packet at the one or more respective locations as taught by VanDervort in Wong's system with the motivation being to determine the round trip time (col. 6 lines 11-12).

For claim 2, Wong discloses wherein specifying the at least one packet filtering criterion (figure 5A, reference 76) comprises specifying a pattern of data to appear in the one or more packets to be transmitted (col. 5 lines 63-66).

For claim 3, Wong discloses wherein specifying the at least one packet filtering criterion (figure 5A, reference 76) comprises specifying information associated with a data protocol in accordance with which the packets are to be transmitted (col. 5 lines 63-66).

For claim 8, Wong disclose wherein the network agents comprise software processes running on nodes of the network at the respective locations (figure 1, reference 18, col. 7 lines 42-44).

For claim 15, Wong discloses wherein processing the recorded information comprises determining which of a plurality of links in the network were traversed by the at least one intercepted packet (col. 7 lines 46-50).

For claims 16-17, 27-28 and 30, Wong discloses apparatus and method for providing a device level security mechanism in a network, the method comprising:

one or more network agents (figure 1, reference 18), adapted to be coupled to the network (reference 10) at respective locations (col. 4 lines 28-30) and to intercept data packets transmitted from one of the end-points to another that meet a

predetermined packet filtering criterion (figure 6, reference step 112) and traverse the respective locations (col. 7 lines 21-25), and to record information regarding the intercepted data packets (figure 6, reference step 120, col. 7 lines 40-41); and to cause one or more data packets meeting the criterion (figure 2, references 22-1 to 22-6) to be transmitted through the network (figure 1, reference 10) from one of the end-points to another (col. 4 lines 45-47), and to process the information recorded by the network agents (reference 18) in order to analyze a route of the at least one intercepted packet through the network (figure 1, reference 10, col. 7 lines 46-50).

Wong does not disclose the network at respective locations intermediate the end-points. In an analogous art, Heddaya et al disclose the network at respective locations intermediate the end-points (col. 7 lines 20-21); and a testing center (figure 2, reference 120), configured to convey the criterion to the network agents (figure 1, reference 14, col. 8 lines 38-42 and col. 9 lines 6-11).

Heddaya et al disclose at least one traffic agent (figure 1, reference 14), which is configured to receive instructions from the testing center (figure 1, reference 20) (col. 8 lines 38-42 and col. 9 lines 6-11) and, responsive thereto, to transmit the packets meeting the criterion from the one of the end-points to the other (col. 8 lines 11-15 as set forth in claim 17); wherein the testing center (figure 1, reference 20) is operative to determine which of the links in the network were traversed by the at least one intercepted packet (col. 8 lines 11-17 as set forth in claim 30).

One skilled in the art would have recognized using the network agents at intermediate the end-points to use the teachings of Heddaya et al in the system of

Wong. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the network agents at intermediate the end-points as taught by Heddaya et al in Wong's system with the motivation being inspected document request message packets as they fly-by and intercepted any request for which it may be possible to fulfill by providing a cached document instead (col. 7 lines 51-54).

However, Wong in view of Heddaya et al does not disclose to record times of arrival of the intercepted data packets. In an analogous art, VanDervort discloses to record time of arrival of the intercepted data packets (col. 6 lines 3-11).

VanDervort discloses wherein the testing center is operative to determine, responsive to the recorded times of arrival, transit times of the at least one intercepted packet over network links connected to the respective locations and traversed by at least one intercepted packet (col. 6 lines 3-11 and col. 8 lines 62-64 as set forth in claim 27); wherein the one or more network agents are operative to intercept multiple data packets (col. 6 lines 6-9), and wherein the testing center is adapted to detect a jitter in transit of the packets over one of the links (col. 10 line 63 to col. 11 line 5 as set forth in claim 28).

One skilled in the art would have recognized to record times of arrival of the intercepted data packet to use the teachings of VanDervort in the system of Wong. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the to record times of arrival of the intercepted data packet as taught by VanDervort in Wong's system with the motivation being to determine the round trip time (col. 6 lines 11-12).

For claim 18, Wong discloses wherein the packet filtering criterion (figure 5A, reference 76) comprises a pattern of data that is included in the packets transmitted by the at least one traffic agent (col. 5 lines 63-66).

For claim 20, Wong discloses wherein the packet filtering criterion (figure 5A, reference 76) comprises information associated with a data protocol in accordance with which the traffic agent transmits the packets (cot. 5 lines 63-66).

For claim 24, Wong discloses wherein the network agents comprise software processes running on the nodes of the network at the respective locations (figure 1, reference 18, col. 7 lines 42-44).

For claim 31, Wong discloses apparatus and method for providing a device level security mechanism in a network, the method comprising:

a computer-readable medium in which program instructions are stored, which instructions, when read by a computer, cause the computer to specify a packet filtering criterion (figure 5A, reference 76, col. 5 lines 50-52) and to engender transmission of one or more data packets meeting the criterion (figure 2, references 22-1 to 22-6) through the network (figure 1, reference 10) from one of the end-points to another (col. 4 lines 45-47), such that at least one of the data packets meeting the criterion is intercepted (figure 6, reference step 112) using the network agents (figure 1, reference 18) at the respective locations in the network, traversed by the packets (col. 7 lines 21-25), which agents record information regarding the at least one intercepted packet at the respective locations (figure 6, reference step 120, col. 7 lines 40-41), and which instructions further cause the computer to receive and process the recorded information

so as to analyze a route of the at least one intercepted packet through the network (col. 7 lines 46-50).

Wong does not disclose using the network agents at the respective locations in the network, intermediate the end-points. In an analogous art, Heddaya et al disclose using the network agents (figure 1, references 14) at the respective locations in the network, intermediate the end-points (col. 7 lines 20-21).

One skilled in the art would have recognized using the network agents at the respective locations in the network, intermediate the end-points to use the teachings of Heddaya et al in the system of Wong. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the network agents at the respective locations in the network, intermediate the end-points as taught by Heddaya et al in Wong's system with the motivation being inspected document request message packets as they fly-by and intercepted any request for which it may be possible to fulfill by providing a cached document instead (col. 7 lines 51-54).

However, Wong in view of Heddaya et al does not disclose a time of arrival of the at least one intercepted packet at the respective locations. In an analogous art, VanDervort discloses a time of arrival of the at least one intercepted packet at the respective locations (col. 6 lines 3-11).

One skilled in the art would have recognized a time of arrival of the at least one intercepted packet at the respective locations to use the teachings of VanDervort in the system of Wong. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the time of arrival of the at least one intercepted

packet at the respective locations as taught by VanDervort in Wong's system with the motivation being to determine the round trip time (col. 6 lines 11-12).

6. Claims 4-5 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (US 6,700,891) in view of Heddaya et al (US 6,622,157) and VanDervort (US 5,812,528) further in view of Coile et al (US 6,006,268).

For claims 4-5 and 21, Wong in view of Heddaya et al and VanDervort does not disclose wherein specifying the information associated with the data protocol comprises specifying a Transport Control Protocol (TCP) sequence number to be assigned to the one or more packets to be transmitted. In an analogous art, Code et al disclose wherein specifying the information associated with the data protocol comprises specifying a Transport Control Protocol (TCP) sequence number to be assigned to the one or more packets to be transmitted (col. 12 lines 45-47).

Coile et al disclose further wherein the TCP sequence number comprises an acknowledgment sequence number (col. 12 lines 45-47 as set forth in claim 5); wherein the information associated with the data protocol comprises a Transport Control Protocol (TCP) sequence number used by the at least one traffic agent (col. 12 lines 45-47 as set forth in claim 21).

One skilled in the art would have recognized a Transport Control Protocol (TCP) sequence number to use the teachings of Coile et al in the system of Wong. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the Transport Control Protocol (TCP) sequence number as taught by Coile et al

in Wong's system with the motivation being function as a serial number that indicates the beginning byte number of the data in the packet (col. 12 lines 47-49).

7. Claims 6, 13-14, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (US 6,700,891) in view of Heddaya et al (US 6,622,157) and VanDervort further in view of McKee et al (US 5,477,531).

For claims 6, 13-14, 19 and 22, Wong in view of Heddaya et al and VanDervort disclose wherein the plurality of end-points comprises a source end-point and a destination end-point (figure 1, reference 12, col. 6 lines 25-29). However, Wong in view of Heddaya et al and VanDervort does not disclose wherein transmitting the one or more data packets comprises transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion. In an analogous art, McKee et al. disclose wherein transmitting the one or more data packets comprises transmitting original packets from the source end-point (figure 1, reference 11) to the destination end-point (figure 1, reference 12, col. 4 lines 7-8), and receiving echo packets returned from the destination end-point (figure 1, reference 12, cot. 4 lines 9-20), both the original and the echo packets meeting the at least one criterion (figure 2, reference blocks 34 and 42, col. 5 lines 22-26 and col. 5 lines 57-59).

McKee et al. disclose further wherein transmitting the one or more data packets comprises transmitting original packets from the source end-point (figure 1, reference 11) to the destination end-point (figure 1, reference 12, col. 4 lines 7-8), and receiving echo packets returned from the destination end-point (figure 1, reference 12, cot. 4 lines

9-20), both the original and the echo packets meeting the at least one criterion (figure 2, reference blocks 34 and 42, col. 5 lines 22-26 and col. 5 lines 57-59), and wherein determining the transit times comprises determining round-trip transit times by intercepting both the original packets and the corresponding echo packets (Abstract lines 5-8 as set forth in claim 13); wherein transmitting the original packets comprises transmitting a Transport Control Protocol (TCP) initialization packet having a first, specified TCP sequence number, and wherein receiving the echo packets comprises receiving a TCP connection acknowledgment packet having a second TCP sequence number, which is determined responsive to the first TCP sequence number (col. 4 line 54 to col. 5 line 13 as set forth in claim 14); wherein the at least one traffic agent comprises first (figure 1, reference 11) and second traffic agents (figure 1, reference 12) at respective network endpoints, and wherein responsive to receiving one of the packets with the pattern of data transmitted by the first traffic agent (figure 1, reference 11), the second traffic agent (figure 1, reference 12) returns a data packet comprising the pattern of data to the first traffic agent (figure 2, reference blocks 34 and 42, col. 5 lines 22-26 and col. 5 lines 57-59 as set forth in claim 19); wherein the plurality of end-points comprises a source end-point (figure 1, reference 11) and a destination end-point figure 1, reference 12), and wherein the one or more data packets meeting the criterion comprise original packets sent from the source end-point (reference 11) to the destination end-point (reference 12, col. 4 lines 7-8) and echo packets returned from the destination end-point (reference 12) responsive to the original packets, both the

original and the echo packets meeting the criterion (figure 2, reference blocks 34 and 42, col. 5 lines 22-26 and col. 5 lines 57-59 as set forth in claim 22).

One skilled in the art would have recognized transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion to use the teachings of McKee et at. in the system of Wong. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion as taught by McKee et al. in Wong's system with the motivation being to measure the round trip time (Abstract line 8).

8. Claims 7, 9, 23 and 25 are rejected under 35 U.S.C. 103(x) as being unpatentable over Wong (US 6,700, 891) in view of Heddaya et al (US 6,622,157) and VanDervort (US 5,812,528) further in view of Tams et al (US 6,327,620).

For claims 7 and 9, Wong in view of Heddaya et al and VanDervort does not disclose wherein the network agents comprise Remote Network Monitoring (RMON) elements, in accordance with one or more applicable standards defined by the Internet Engineering Task Force (IETF). In an analogous art, Tams et al. disclose wherein the network agents comprise Remote Network Monitoring (RMON) elements, in accordance with one or more applicable standards defined by the Internet Engineering Task Force (IETF) (col. 2 lines 12-13).

Tams et al. disclose further wherein the network agents comprise stand-alone probes (col. 2 lines 15-19 as set forth in claim 9).

One skilled in the art would have recognized Remote Network Monitoring (RMON) elements to use the teachings of Tams et al. in the system of Wong. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the Remote Network Monitoring (RMON) elements as taught by Tams et al. in Wong's system with the motivation being to facilitate the monitoring of network activity (col. 2 line 11).

For claim 23, the claim is directed to the same subject matter in claim 7. Therefore, it is subjected to the same rejection.

For claim 25, the claim is directed to the same subject matter in claim 9. Therefore, it is subjected to the same rejection.

Response to Arguments

9. Applicant's arguments with respect to claims 1-9, 11-25 and 27-31 have been considered but are moot in view of the new ground(s) of rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MAN U. PHAN
PRIMARY EXAMINER